

Appl. No. 10/840,095
Amdt. dated 06/26/2007
Response to Office Action of 04/05/2007

Attorney Docket No.: N1085-00288
[TSMC2004-0032]

REMARKS/ARGUMENTS

Claims 1, 2, 4-19 and 21-23 are currently pending in this application. Claims 18 and 19 were rejected in the subject Office Action. Claims 1, 2, 4-17 and 21-23 were allowed.

- 5 Claim 18 is hereby amended. Applicants respectfully request re-examination, reconsideration and allowance of each of pending claims 18 and 19 in addition to previously allowed claims 1, 2, 4-17 and 21-23.

I. Allowable Subject Matter

10 Applicants acknowledge with appreciation the Examiner's indication that claims 1-2, 4-17 and 21-23 are allowed.

II. Claim Rejections

15 On page 2 of the subject Office Action, claim 18 was rejected under 35 U.S.C. § 102(b) as being anticipated by Simpson et al. (U.S. Patent No. 6,297,155), hereinafter "Simpson" and on page 4 of the subject Office action, claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Simpson in view of a person of ordinary skill in the art. Applicants respectfully submit that these claim rejections are overcome for reasons set forth below.

 Claim 18 is an independent claim from which dependent claim 19 depends. Independent claim 18 has been amended. Claim 18 recites the features of:

20 first immersing the wafer in a first electrolytic solution containing metal ions and first biasing the wafer negatively with respect to the first electrolytic solution so as to create a first current flow and a first current density, the first immersing being the initial step in the electroplating and a
25 continuous operation in which said first current flow and said first current density are constantly maintained;

 Independent claim 18 is distinguished from Simpson which shows in FIG. 9 and teaches in the corresponding sections of column 13 identified by the Examiner, the

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5 initialization step 252 consist of a plurality of high-powered, positive-pulsed cycles and is not a continuous operation in which the current density and current flow are constantly maintained. An examination of FIG. 9 clearly shows that the initialization step 252 is a series of individual steps. If only the first of the non-zero initialization steps, i.e., the first of the "pulsed cycles", was considered with respect to the first step in claim 18, claim 18 would nonetheless be distinguished from Simpson under this analysis because the second step in Simpson would then be the zero current step that follows the first pulsed non-zero step. The second step in claim 18 is a non-zero step.

10 Claim 18 is therefore distinguished from Simpson and claim 19 is also distinguished by virtue of its dependency from claim 18. The indication in the Office action that the current density and time recited in claim 19 would be obvious to a person of ordinary skill in the art does not make up for the above-stated deficiencies of Simpson.

15 As such, the rejection of claims 18 and 19 under 35 U.S.C. § 102 and 35 U.S.C. § 103, respectfully, should be withdrawn.

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CONCLUSION

Based on the foregoing, each of pending claims 1, 2, 4-19 and 21-23 is in allowable form and the application in condition for allowance, which action is respectfully and expeditiously requested.

- 5 The Assistant Commissioner for Patents is hereby authorized to charge any fees or credit any excess payment that may be associated with this communication to Deposit Account 04-1679.

Respectfully submitted,

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Dated: June 26, 2007


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